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ABNORMAL PRESENTATION

Objectives:

- Define fetal malpresentations.
- List the disposing factors for malpresentations.
- Identify the types of fetal malpresentations and the recommended delivery options for each.

This lecture is very important for the OSCE exam

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PRELUDE

-This page is to just to help you get familiar with babies in wombs. Give it a glance, or two-

Let's start using fancy baby terminology: Fetal presentation, lie, attitude, and position.

Fetal presentation: Portion of the fetus overlying the pelvic inlet. The commonest is cephalic (head down)

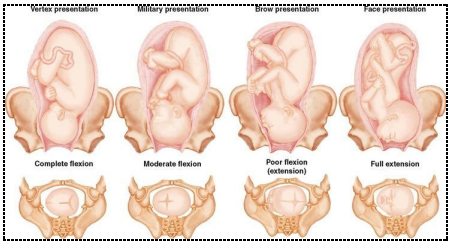
Fetal lie: the relationship of the longitudinal axis of the fetus to longitudinal axis of the mother

There are three (3) lies:

- **Longitudinal:** fetus and mother are in same vertical axis
- **Transverse:** fetus at right angle to mother
- **Oblique:** fetus at 45° angle to mother

Fetal Attitude:

Degree of extension-flexion of the fetal head with cephalic presentation. The most common attitude is vertex.

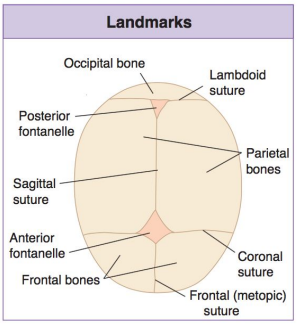


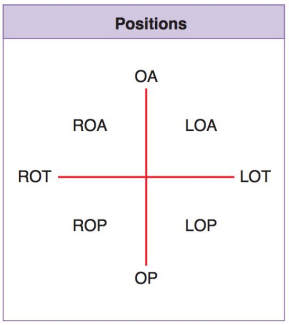
1. **Vertex:** head is maximally flexed **(this is normal)**
2. **Military:** head is partially flexed
3. **Brow:** head is partially extended
4. **Face:** head is maximally extended

Fetal Position:

Relationship of a definite presenting fetal part to the maternal bony pelvis. It is expressed in terms stating whether the orientation part is anterior or posterior, left or right. The **most common position at delivery is occiput anterior**

Landmarks:

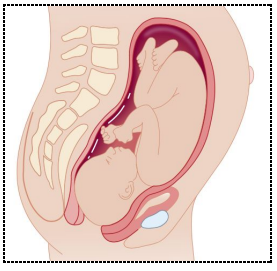




- **Occiput:** with a flexed head (vertex) **(normal)**
- **Sacrum:** with a breech presentation
- **Mentum:** with an extended head (face presentation)
- **Frontal:** with partially extended head (brow presentation)

(note that the pictures assumes an occiput baby)

An A-ok baby will be head down and flexed EVERYTHING, like this >



Soooo, what's an abnormal presentation?

Anything that isn't a vertex (cephalic) presentation. Anything that isn't this >

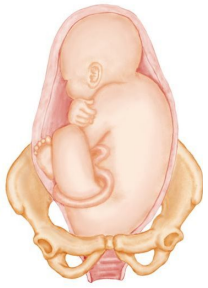
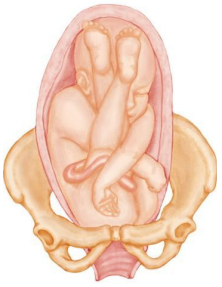
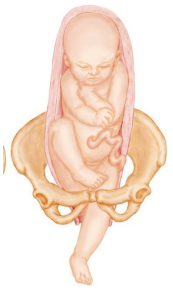
Now that that's out of the way, let get started.

1- BREECH PRESENTATION:

What is the most common fetal malpresentation? Breech presentation

Feet and buttoks present first. Incidence is 3% **in term** babies (in preterm babies the incidence is much higher. Before 28 weeks, approximately 25% of fetuses are presenting as a breech and by 34 weeks gestation, most fetuses have assumed the vertex presentation position. **So the major factor predisposing to breech presentation is prematurity**.)*

TYPES:

Complete	Frank	Incomplete (footling)
Flexed legs at hip and knee joints 	**Flexed** legs at hip joints **Extended** legs at knee joints 	**Extended** legs at hip and knee joints 

WHAT CAUSES A BREECH PRESENTATION?

Fetal causes	Maternal causes
<u>All related to fetal movement restriction:</u> • Hydrocephalus • Poly hydroniums • Oligohydramnios • Placenta Previa • Short umbilical cord	• Uterines anomalies: e.g. fibroid uterus • Small pelvis (both reduce the surface area in which the fetus can move) • **The most common cause of breech presentation is PRETERM LABOR***

The diagnosis of breech presentation can often be made by the **Leopold examination** in which the firm fetal head is palpated in the fundal region and the softer, smaller breech occupies the lower uterine segment above the symphysis pubis. but ultrasound may be required for definitive diagnosis. In a frank breech in labor, the fetal buttocks, anus, sacrum, and ischial tuberosities can be palpated on vaginal examination. With a complete breech, the feet, ankles, and often the buttocks are palpable through the dilated cervix. Vaginal examination of an incomplete breech reveals one or both fetal feet.

MANAGEMENT: If you were asked about the management you have to <u>mention all 3 option</u>.

Patients are offered the options of vaginal breech delivery, external cephalic version, or c-section.

The standard of care now in most practices is to deliver all breeches by cesarean to avoid the potential morbidities of umbilical cord prolapse, head entrapment, birth asphyxia, and birth trauma.

In modern obstetrics, breech presentation at term is almost always managed with cesarean section. You have to take the consent of the mother before attempting anything especially if a normal vaginal delivery is a possibility (depending on a criteria - you can see the box for extra information). You have to take the consent from the mother after explaining to her all the risks that can endanger her baby during the normal vaginal delivery (asphyxia, cerebral palsy, ...etc). Sometimes the mother is admitted for cesarean section because of an abnormal presentation. **<u>In the next day, US before entering the delivery room is a musts</u>**. We have to make sure that the presentation did not change (to vertex for example) because at any time the presentation can change especially in a multigravida.

BOX 13-4

CRITERIA FOR VAGINAL DELIVERY OF A BREECH PRESENTATION

Fetus must be in a frank or complete breech presentation.
Gestational age should be at least 36 weeks.
Estimated fetal weight should be between 2500 and 3800 g.
Fetal head must be flexed.
Maternal pelvis must be adequately large, as assessed by x-ray pelvimetry* or tested by prior delivery of a reasonably large baby.
There must be no other maternal or fetal indication for cesarean delivery.
Anesthesiologist must be in attendance.
Obstetrician must be experienced.
Assistant must be scrubbed and prepared to guide the fetal head into the pelvis.

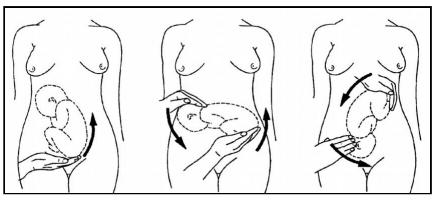
*Inlet: anteroposterior (AP) diameter ≥11.0 cm; transverse diameter ≥10.0 cm. Midpelvis: AP ≥11.5 cm, transverse diameter ≥10.0 cm.

In a primigravida the management is cesarean section because:

- there is no prior delivery so it is hard to make sure that maternal pelvis is adequately large
- ECV is useless because the muscles of the abdominal wall is strong.

EXTERNAL CEPHALIC VERSION:

A procedure in which the obstetrician manually converts the breech fetus to a vertex presentation through external uterine manipulation under ultrasonic guidance. Done after 38 weeks because of the tendency for the premature fetus to revert spontaneously to a breech presentation



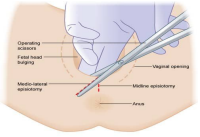
- If blood group is rhesus negative should receive anti D immunoglobulin.
- It should be done in the theater with everything ready for c-section.
- **Contraindications:**

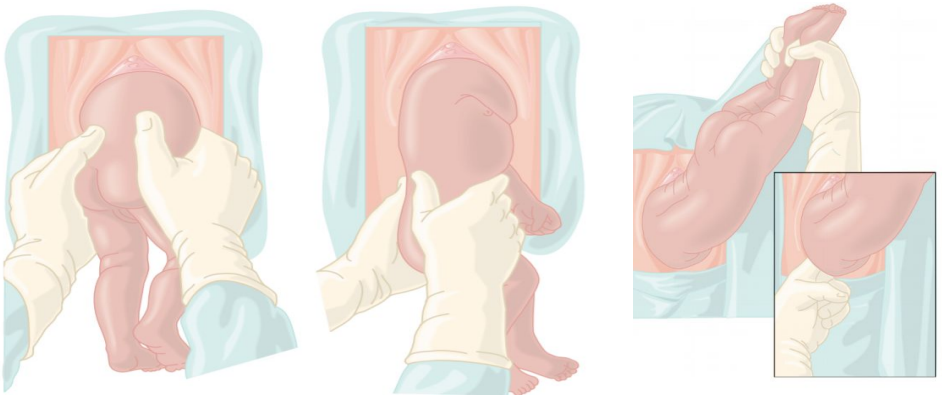
1. Contracted pelvis
2. Scared uterus (prior uterine surgery)
3. Uteroplacental insufficiency
4. Placenta Previa
5. Hypertensive patient
6. Intrauterine growth restriction
7. Oligohydramnios

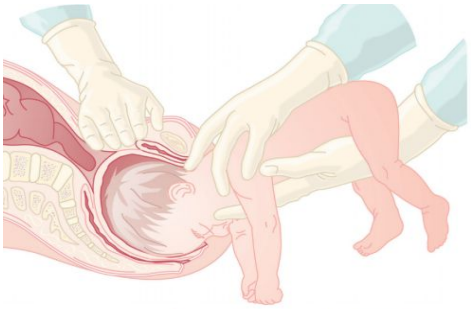
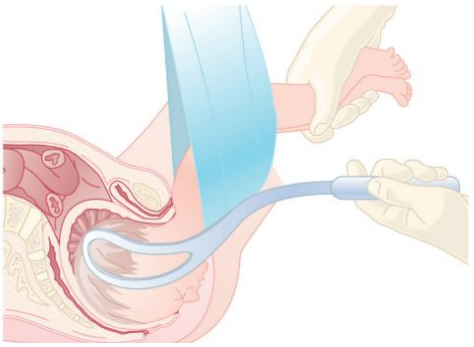
- **Complications:**

1. Membrane rupture
2. Uterine rupture
3. Abruption placenta
4. Cord prolapse

ASSISTED BREECH DELIVERY: Not for everyone. See the criteria. watch the video!

1	2	3
Patient in lithotomy position. Cervix fully dilated. If not the patient is sedated until then. 	When buttocks protrudes through the vulva an episiotomy should be performed 	• Extended legs must be flexed to assist the spontaneous delivery of the fetus to the umbilicus. • With delivery of the umbilicus small loop of cord is pulled down to feel the pulsations

4
• Once the fetus has delivered spontaneously to the umbilicus, gentle downward traction is exerted until the scapulae appear. After delivery of the scapulae, the shoulders are delivered by sweeping each arm (first the anterior then the posterior) in turn across the fetal chest until only the fetal head remains undelivered. • Delivery of the anterior shoulder by downward traction. • Delivery of the posterior shoulder by upward traction. The posterior arm is freed digitally by splinting the fetal humerus 

5 (there are 3 methods for the delivery of the after coming head)	
• Mauriceau-Smellie-Veit maneuver the head is delivered by manual flexion of the fetal head with one hand flexing the head at the base of the skull while the operator's other hand is applied to the fetal maxilla for downward flexion. Abdominal pressure is applied to maintain flexion of the fetal head. 	• **OR Burn Marshal's manoeuvre:** Keep the baby hanging to promote head flexion • **OR** Piper forceps are routinely used (this method has been shown to result in delivery of the head with the least amount of trauma to the fetus) 

➔ **Complications:**

Cord prolapse, lower limb fracture , abdominal organs injuries, brachial plexus nerve injuries, Difficulties in delivering the head and intracranial bleeding.

Asphyxia typically results from umbilical cord prolapse during labor or entrapment of the aftercoming head. Birth trauma can occur whenever forceful traction is exerted on the fetus and can involve the brachial plexus (Erb palsy), pharynx, and liver.

2- FACE PRESENTATION:

- When the fetal head is hyperextended such that the fetal face, between the chin and orbits, is the presenting part. The incidence is about 1 in 500 deliveries.
- The presenting diameter of the face is the submento –bregmatic , which measures 9.5 cm.

Etiology:

Associated with excessive tone of the extensor muscles of the fetal neck, extreme prematurity, high maternal parity. Rare causes like tumor of the neck , thyroid , thymus gland and cord around the neck (as it prevents flexion)

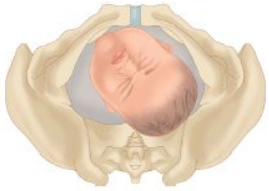
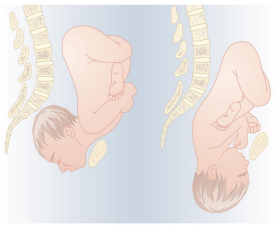
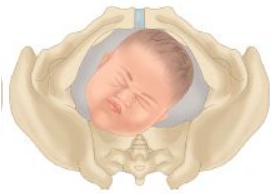
In the majority of cases, no etiologic factor is evident.

Diagnosed:

in labor by palpating the nose, mouth, and the eyes on vaginal examination.

Because anencephalic fetuses uniformly present face first, anencephaly should be ruled out when face presentation is suspected.

MODE OF DELIVERY:

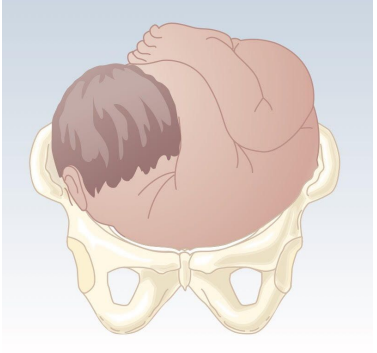
mento-anterior (chin on pubis)	mento-posterior (chin on spine)
 Right mento-anterior  FIGURE 13-7 Spontaneous delivery of a mentum anterior face presentation. Note the flexion of the head under the symphysis pu The chin appears first, followed by the nose, brow, vertex, and occiput.	 Right mento-posterior
Vaginal delivery is possible and the head is delivered by **flexion.** (the sacrum will allow you)	Vaginal delivery is not possible and patient should be delivered by **caesarian section**.

The following are other rare presentations

3- BROW PRESENTATION:

- ➔ occurs when the presenting part of the fetus is between the facial orbits and anterior fontanelle. This type of presentation arises as the result of extension of the fetal head such that it is midway between flexion (vertex presentation) and hyperextension (face presentation).
- ➔ **The incidence is about 1 in 1400 deliveries.**
- ➔ The presenting diameter is mento-vertical (13.5 cm), which is much longer than the presenting diameter for a face or a vertex presentation. See the picture
- ➔ **the large presenting diameter makes vaginal delivery impossible, unless the fetus is very small or the maternal pelvis is very large, and delivery must be accomplished by cesarean delivery.**

4- SHOULDER PRESENTATION:



- ➔ Due to **oblique** or **transverse** lie in labor.
- ➔ Common in women with high parity.
- ➔ Also occurs in placenta previa, uterine anomalies, and pelvic tumors.
- ➔ If diagnosed in early labor with intact membrane and no other pathology external cephalic version can be tried.
- ➔ In case of rupture of the membranes exclude cord prolapse.
- ➔ Delivery of shoulder presentation in labor with rupture membrane is by **caesarian section.**

5- COMPOUND PRESENTATION:

- ➔ occurs when a fetal extremity (usually the hand) prolapses alongside the presenting part (the head) and both parts enter the maternal pelvis at the same time.
- ➔ This presentation occurs more frequently with premature gestations.
- ➔ The incidence of a hand or arm prolapsing alongside the presenting fetal head is 1 in 700 deliveries.
- ➔ Usually the prolapsed part of the fetus does not interfere with labor.
- ➔ If the arm prolapses, it is best to wait to see if it moves out of the way as the head descends.
- ➔ If it does not, the arm may be gently pushed upward while the head is simultaneously pushed downward by fundal pressure.
- ➔ **If the complete extremity prolapses and the fetus then converts to a shoulder presentation, birth must be accomplished by cesarean delivery.**

★ **Q1: Which one of the following is the most common cause of breech presentation?**

A. Preterm labor.
B. Multiple pregnancy.
C. Null parity.
D. Mother age.

The Answer is: A

★ **Q2: Which one of the following is the most common presentation of twins?**

A. Cephalic Cephalic.
B. Cephalic Breech.
C. Breech Breech.
D. Breech Cephalic.

The Answer is: A

★ **Q3: You are examining a primigravida woman in labour and you found the presentation is face mento anterior. Which of the following is a part in her management to deliver this baby vaginally?**

A. Deliver the head with more extension.
B. Episiotomy is contraindicated since it may injure fetal face.
C. You can use forceps to deliver the baby
D. Use ventouse only after crowning of the head

The Answer is: C

★ **Q4: lady with twin pregnancy presented at 38 weeks of gestation with labour pains, first was breech presentation and second was transverse lie. What is best method to deliver this lady?**

A. Vaginal breech delivery of first twin and CS for the second.
B. Vaginal breech delivery of forest twin and internal podalic version of the second.
C. CS for both twin.
D. External cephalic version and vaginal delivery of both twin.

The answer is: ? not sure C.

Q5: 37 week pregnant lady come to the clinic with breech presentation she likes to have external cephalic version. Which one of the following is contraindication?

A. Complete breech.
B. placenta previa.
C. primigravida.

The Answer is: B.